

GENERIC · POWERTRAIN

P0A8F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0A8F

14 Volt Power Module System Performance

P0A8F indicates that the 14-volt power module, which is the DC-DC converter that steps high-voltage battery power down to charge the 12-volt system on hybrids and electric vehicles, is not performing within its expected operating range. The powertrain control module monitors the module's output voltage and current and sets this code when the delivered 12-volt supply deviates from the commanded target or the module reports an internal performance fault.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	High	Professional	Hybrid propulsion

Symptoms you may notice

- Illumination of the 12-volt battery warning light or a master hybrid/EV system warning on the dashboard
- The 12-volt battery slowly drains, leading to hard starting, dim lights, or a no-start condition after the vehicle sits
- Accessories such as infotainment, power windows, or climate control behave erratically or shut down unexpectedly
- The hybrid or electric system may enter a reduced-power mode, limiting vehicle speed or disabling the high-voltage contactors
- Often no symptoms besides the warning light, especially if the module is only marginally out of specification

Common causes, most likely first

- 1 A failing 14-volt power module (DC-DC converter) internal to the hybrid/EV assembly, such as worn capacitors or damaged switching components
- 2 Corroded, loose, or damaged wiring and connectors between the power module and the 12-volt battery or chassis ground
- 3 A weak or aged 12-volt auxiliary battery that cannot accept charge properly, causing the module to appear out of performance range
- 4 High-voltage cable or connector faults that interrupt the input supply to the power module
- 5 A software calibration issue in the power module or powertrain control module that misreports performance
- 6 Cooling system faults for the power module, such as a blocked coolant passage or failed pump, causing overheating and derating



How to diagnose and fix it

- 1 Perform a thorough visual inspection of the 12-volt battery, its terminals, and the power module connectors for corrosion, looseness, or damage
- 2 Load-test the 12-volt auxiliary battery and recharge or replace it if it fails, then clear the code and retest
- 3 Measure the power module's 12-volt output voltage and compare it to the commanded value using a scan tool with live data
- 4 Check the high-voltage input cables and connectors for proper voltage and integrity, following all high-voltage safety procedures
- 5 Inspect the power module cooling circuit for flow and coolant condition if the vehicle uses liquid cooling
- 6 Check for technical service bulletins or calibration updates for the power module and apply any applicable software updates
- 7 If all external checks pass, replace the 14-volt power module or the assembly that contains it, then verify the repair with a test drive and scan tool

What technicians overlook on P0A8F

- A weak 12-volt battery is the most common false trigger for this code because the power module cannot maintain its target output when the battery is internally shorted or sulfated.
- Corroded ground straps between the power module and the chassis are frequently missed and can mimic an internal module failure by causing voltage drops under load.
- The code can set intermittently from a poor connection at the high-voltage interlock loop, so always check for stored history codes and freeze-frame data before condemning the module.
- On some vehicles, the 14-volt power module is integrated into the hybrid battery assembly, making replacement a high-voltage, professional-level job rather than a simple bolt-on part.
- A cooling fan or pump failure for the power module may not set a separate code, so verify that the module's cooling system is functioning before replacing expensive components.

Can I keep driving with P0A8F?

Do not continue driving with this code if the 12-volt warning light is on or the vehicle is in a reduced-power mode, because a failing power module can leave you stranded with a dead battery. If the only symptom is the warning light and the vehicle drives normally, limit driving to a short trip to a repair shop and avoid using unnecessary electrical accessories.

Tools that help

- Scan tool with live data and hybrid/EV capability
- Digital multimeter with high-voltage safety rating
- Battery load tester
- Insulation tester for high-voltage cables
- Manufacturer service information for high-voltage safety procedures



Reading P0A8F

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
A	Hybrid propulsion.
8F	The exact fault within that area.

Often seen with

P0562 System Voltage Low · **P0A0D** High Voltage System Interlock Circuit A High · **P0A8E** 14 Volt Power Module System Voltage High · **P0A90** Drive Motor A Performance · **P0A91** Drive Motor B Performance

See it working

Watch the animated explainer [Engine Cooling System Trainer: How Engines Stay Cool](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0a8f/>

